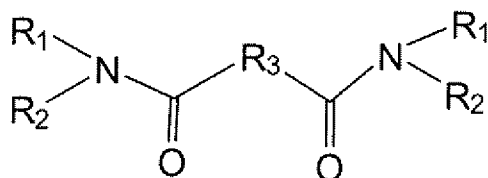


IN THE CLAIMS:

1. (Currently Amended) An extractant for palladium comprising a sulfur-containing diamide compound represented by the following structural formula (1):

(1)



wherein R₁ and R₂ each represent a group selected from:

a chain hydrocarbon group having 1 to 18 carbon atoms which may be branched,

an alicyclic hydrocarbon group having 1 to 10 carbon atoms, and

an aromatic hydrocarbon group having 1 to 14 carbon atoms, and

R₃ represents a group represented by {(CH₂)_n S (CH₂)_m}_L wherein n, m and L each represent an integer of from 1 to 4.

2. (Previously Presented) A method for separating palladium, which comprises bringing an aqueous solution containing palladium into contact with an organic phase containing the extractant for palladium according to claim 1 in an acidic condition, thereby extracting palladium from the organic phase.

3. (Previously Presented) A method for separating palladium, which comprises subjecting the palladium extracted by the organic phase according to claim 2 to a back-extraction with an aqueous solution of hydrochloric acid containing thiourea, thereby obtaining an aqueous solution containing palladium.

4. (Currently Amended) A method for separating and recovering platinum group metals including palladium, platinum and rhodium from a treated solution containing platinum group metals and base metals, which comprises:

(a) neutralizing said treated solution containing platinum group metals including palladium, platinum and rhodium and base metals, thereby separating and eliminating, as a precipitate, metals other than the platinum group metals coexisting in said solution (first step); bringing said solution containing platinum group metals including palladium, platinum and rhodium into contact with the extractant according to claim 1 comprising a sulfur-containing diamide compound represented by the structural formula (1), thereby separating and recovering palladium from an acidic solution containing palladium (second step);

(b) bringing said extractant for palladium containing palladium into contact with an aqueous solution of hydrochloric acid containing thiourea to recover palladium, thereby obtaining palladium (third step); and

(c) bringing said aqueous solution containing platinum and rhodium, which is obtainable in the second step, into contact with a tributylphosphoric acid-based extractant to extract and separate platinum from rhodium, thereby separating and recovering platinum and rhodium (fourth step).

5. (New) An extractant for palladium comprising a sulfur-containing diamide compound of claim 1, wherein the aromatic hydrocarbon group having 1-14 carbon atom is selected from the group consisting of phenyl, naphthyl, anthryl, xylyl, cumenyl, benzyl, phenylethyl, styryl, cinnamyl, biphenyl, and phenathryl.

6. (New) An extractant for palladium comprising a sulfur-containing diamide compound of claim 1, wherein the alicyclic hydrocarbons having 1 to 10 carbon atoms is selected from the group consisting of cyclobutyl, cyclopentyl, cyclohexyl, cycloheptyl, cyclooctyl, cyclononyl, cyclodecyl, cyclohexenyl, cyclohexadienyl, cyclohexatrienyl, cyclooctenyl, and cyclooctadienyl.

7. (New) An extractant for palladium comprising a sulfur-containing diamide compound of claim 1, wherein the chain hydrocarbon group having 1 to 18 carbon atoms is selected from the group consisting of methyl, ethyl, propyl, butyl, pentyl, hexyl, heptyl, octyl, nonyl, decyl, undecyl, dodecyl, tridecyl, tetradecyl, pentadecyl, hexadecyl, heptadecyl, octadecyl, isopropyl, isobutyl, s-butyl, t-butyl, isopentyl, neopentyl, t-pentyl, 2-ethylhexyl, vinyl, allyl, 1-propenyl, isopropenyl, 1-butenyl, 2-butenyl, 2-methylallyl, 1-heptynyl, 1-hexenyl, 1-heptenyl, 1-octenyl, and 2-methyl-1-propenyl.

8. (New) An extractant for palladium comprising a sulfur-containing diamide compound of claim 1, wherein R_3 represents a group represented by $\{(CH_2)_nS(CH_2)_m\}_L$ wherein n, m each represent an integer of from 1 to 4 and wherein L is 1.